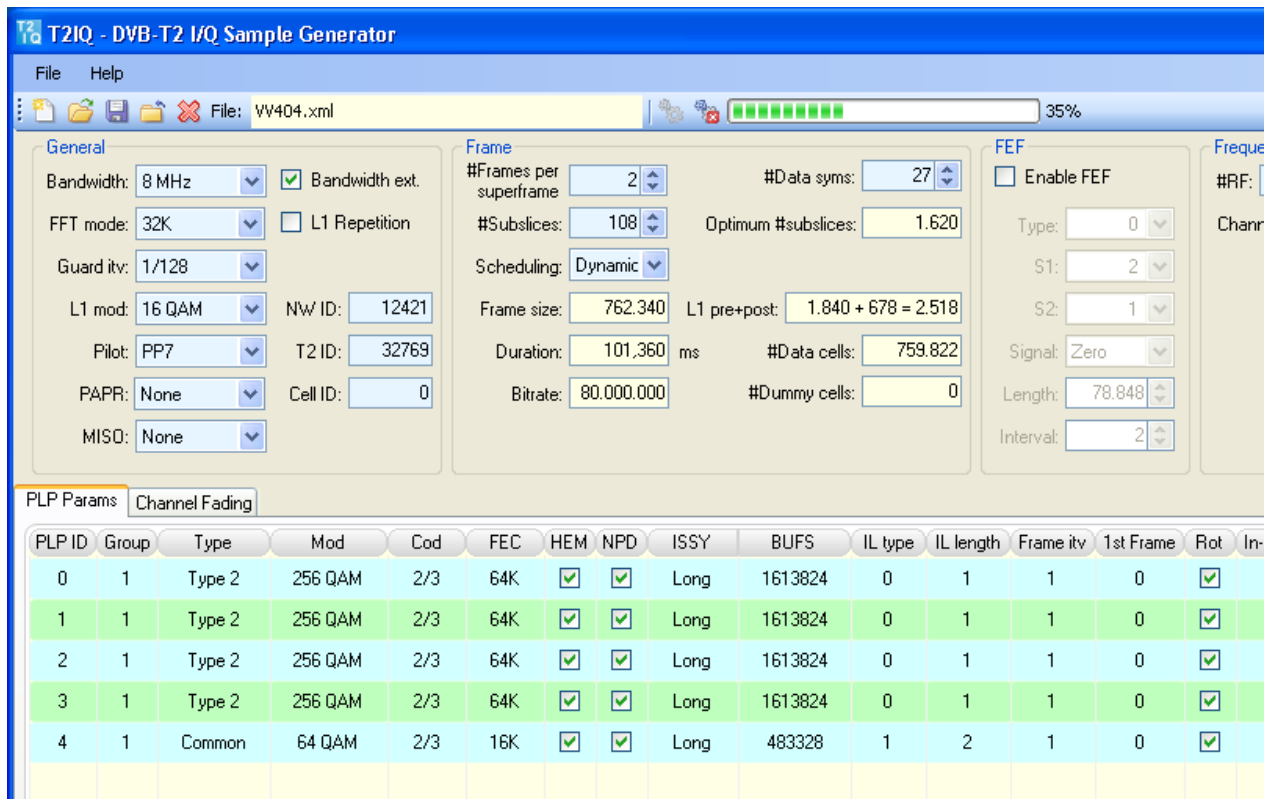


# DVB-T2 I/Q Generator

- Off-line generation of I/Q sample files
- Supports multi-PLP, MISO and TFS
- AWGN and fading path simulator



## FEATURES

- Complete off-line DVB-T2 modulator and channel simulator that generates T2-MI or I/Q sample files
- Real-time DVB-T2 RF and T2-MI output
- Full user control over general DVB-T2 parameters, T2-Frame structure and parameters per PLP
- Input from Transport-Stream files or built-in O151 PRBS test-signal generator
- “Big-TS splitter” function with SI processing for easy generation of multi-PLP streams with a common PLP
- Supports multiple I/Q sample formats with adjustable output level; I/Q samples can be played out on DTA-115 or DTU-215 with **StreamXpress**
- MISO simulation: Generation of both MISO transmitter signals, independent channel model applied to each signal

- Includes fully-featured channel simulator with AWGN generator (adjustable SNR), multipath fading, Rayleigh channels and Doppler simulation to accurately simulate reflections and a moving receiver

## APPLICATIONS

- Test-signal generator for DVB-T2 receiver chip development, testing and evaluation
- Signal generator for DVB-T2 receiver demonstrations and field trials

## SUPPORT

- **T2IQ** is being improved continuously and keeps track of developments in DVB-T2. Any product updates will be free for a period of at least one year after invoice date

## SUPPORTED DVB-T2 PARAMETERS

Parameter	Range
<i>General</i>	
Bandwidth	1.7, 5, 6, 7, 8 or 10MHz
FFT mode	1K, 2K, 4K, 8K, 16K or 32K
Guard interval	1/32, 1/16, 1/8, 1/4, 1/128, 19/128 or 19/256
L1 modulation	BPSK, QPSK, 16/64-QAM
Pilot pattern	PP1 .. PP8
Bandwidth ext.	Extended carrier mode yes/no
PAPR	None, ACE, TR, ACE+TR
MISO	Tx1 and/or Tx2, Tx1+Tx2
IDs	Network, Cell, T2 System
<i>PLP</i>	
IDs	PLP ID, Group ID
Type	Type 1, Type 2, Common
Modulation	QPSK, 16/64/256-QAM
Code rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6
FEC	16K or 64K
HEM	High-efficiency/Normal mode
NPD	On/off
ISSY insertion	None, Long, Short, BUFS, Tdesign
Time interleaver	Type, Length, Interval, 1 <sup>st</sup> Frame
Constellation	Rotated, Normal
Signalling	In band, None
Other PLPs	List in in-band signalling yes/no
FF	PLP on same channel yes/no
<i>Frame</i>	
Structure	#T2 frames, #T2 sub slices, #data symbols
Scheduling	Static/dynamic #FEC blocks
<i>Source</i>	
PRBS	O151 PRBS test signal
TS	One (partial) stream per PLP
Big TS	T2IQ extracts partial streams
<i>TFS</i>	
#Carriers	1 .. 7
<i>FEF</i>	
Parameters	Type, S1, S2, Length, Interval
Signal	Zero, 1K OFDM of PRBS signal
<i>Output</i>	
I/Q Format	Float32, Int16, Text
T2-MI	VBR, CBR
Real-time	DVB-T2 RF, T2-MI over ASI/IP

## CHANNEL SIMULATION PARAMETERS

Parameter	Range
AWGN SNR	0 .. 60dB
<i>Fading Paths</i>	
#Paths	0 .. 32
Type	Constant delay Constant Doppler Rayleigh Jakes Rayleigh Gaussian
Attenuation	0 .. 60dB
Phase	0 .. 360°
Doppler (@8MHz)	0.3mHz .. 274kHz (Gaussian) 1.8mHz .. 914kHz (Jakes)

## PC REQUIREMENTS

Platform	Windows XP/2003/Vista .NET v2.0
Processor*	P4@2.0GHz (off-line gen.) Core 2, Core i7 (real-time)
RAM	1 GB min.

\* Or equivalent AMD processors

## RELATED PRODUCTS

Type	Description
DTA-115	Multi-standard modulator with VHF/UHF upconverter for PCI
DTU-215	Multi-standard modulator with VHF/UHF upconverter for USB
DTA-2135-T2	DVB-T2 receiver for PCI
DTC-300	<b>StreamXpress</b> payout software
DTC-384	<b>T2MI</b> DVB-T2 gateway with file input

## ORDERING INFORMATION

Type	Description
DTC-385	<b>T2IQ</b> DVB-T2 I/Q sample generator

Please refer to [www.dektec.com](http://www.dektec.com) for the latest pricing and a list of distributors and resellers.